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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,674	04/13/2001	Shunpei Yamazaki	12732-028001	2128
26171 7590 05/25/2007 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER MACKOWEY, ANTHONY M	
			ART UNIT 2624	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/833,674

Applicant(s)

YAMAZAKI ET AL.

Examiner

Anthony Mackowey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 13 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-9,12-35,38-43,46-53,56-59,62-85,88-93,96-100 and 109-116 is/are pending in the application.
- 4a) Of the above claim(s) 13-34,39-42,47-50,63-84,89-92 and 97-100 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9,12,35,38,43,46,51-53,56-59,62,85,88,93,96 and 109-116 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2001, 25 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 13 March 2007 have been fully considered but they are not persuasive.

Applicant submits the Harkin reference fails to disclose or suggest "a display device having pixels, each of which includes a light emitting element and a sensor for reading biological information." Applicant argues, "Harkin provides no indication that elements of the fingerprint sensor are the same size as pixels of the display device such that each pixel would include a sensor." Applicant submits that for this reason Harkin fails to disclose the display device recited in claim 1. The Examiner respectfully disagrees with this interpretation of the Harkin reference and further submits the Harkin reference discloses or at least suggests the sensors and display elements are arranged in such a manner that one of ordinary skill in the art given the broadest reasonable interpretation of the claim language would find Harkin teaches "a display device having pixels, each of which includes a light emitting elements and a sensor for reading biological information of a user." Examiner acknowledges Harkin fails to explicitly show in the figures both the sensors and the display elements. However, col. 9, lines 47-63 defines a relationship between the arrangement of the sensor array and the display element array which the Examiner believes suggests the sensors and display elements are of relatively the same size and can be construed as being within the same pixel area as they are aligned in rows and columns with one another. Therefore, the Examiner believes the Harkin reference teaches "a display device having pixels, each of which includes a light emitting element and a sensor for reading biological information of a user" as recited in the claims.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the fingerprint sensor and the thin film components required for the array are fabricated directly on the same surface of the plate which carries the display elements" recited in the last paragraph of page 20) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-9, 12, 35, 38, 43, 46, 51-53, 56-59, 62, 85, 88, 93 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ritter (USPN 6,657,538, cited on applicant's IDS) in view of Harkin (USPN 6,327,376, corresponding to WO 99/28701, cited on applicant's IDS) and Wang (USPN 6,175,922, previously cited).

Regarding claims 1 and 51, Ritter discloses a system for identifying an individual and a portable information device (col. 4, lines 16-27), comprising: a display device (column 4, line 25-32); means for checking read biological information with reference biological information (column 4, line 32-52); and means for transmitting information about the matching to a

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destination of communication (col. 5, lines 9-48) only when the read biological information has matched the reference biological information (col. 4, lines 40-48, Ritter teaches if the biometrics are not authenticated, usage may be prevented such as turning the phone off.).

Ritter does not disclose the display device having pixels, each of which includes a light emitting element and a sensor for reading biological information of a user or the light-emitting element comprises a cathode, a light emitting layer and an anode. Harkin discloses an electronic apparatus comprising fingerprint sensing devices constructed using transparent sense electrodes and combined with a flat panel display device such that fingerprints are sensed as the user is interacting with the display (column 9, line 14-63). Harkin further discloses the fingerprint sensor and the thin film components required for the array may be fabricated directly on the surface of the upper plate of the display (col. 9, lines 37-40) and the sensor array and the display element array are related and row and column conductors in the sensor array are aligned with the row and column conductors in the display element array (col. 9, lines 47-63), thus the display device is construed as having pixels including a light emitting element and a sensor for reading biological information. Regarding the light-emitting element comprising a cathode, and light emitting layer and an anode, Harkin discloses the display device may be an electroluminescent display, which inherently is comprised of these elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to read biological information of a user by means of a display as taught by Harkin in order to dispose the sensing device over a display while still allowing the output of the display to be viewed for use in the field of portable electronic products using displays such as mobile phones, smart cards, personal digital assistants (PDAs), and other portable computers while avoiding the need for a larger casing or sacrificing

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an area of the casing that could otherwise be used for other purposes (Harkin, column 4, line 8-35).

Ritter does not explicitly disclose judging legitimacy of the user by checking read biological information with the reference biological information or transmitting information about the judgment to a destination of communication. Examiner notes “legitimacy” is being interpreted as meaning “authorization” or “authorized” as agreed upon during the in person interview conducted on November 14, 2006. Wang teaches a portable authorization device comprising: a means for judging legitimacy of the user by checking read biological information (col. 6, lines 40-57; col. 11, line 61 – col. 12, line 6; col. 16, lines,20-34); transmitting information about the judgment to a destination of communication (col. 5, lines 30-39; col. 6, lines 40-57; col. 7, lines 12-24; col. 11, line 61 – col. 12, line 6; col. 16, lines 20-34, Wang teaches approval requires the device to determine whether the user has proper access to the device through identification such as biometrics, therefore the transmitted approval information inherently indicates the judgment that that the user is legitimate.). The teachings of Ritter and Wang are combinable because they are both concerned with portable devices for identifying an individual through read biological information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify system and device taught by Ritter to include a means for judging the legitimacy of the user; means for transmitting information about the judgment to a destination of communication as taught by Wang in order to keep identification data related to the user secure within the device, enhancing confidentiality and security (Wang, col. 5, lines 33-39; col. 6, lines 32-48). This is obviously a desirable

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improvement over Ritter alone, which teaches directly transmitting the identification data to the destination of communication (col. 5, lines 9-18).

Ritter also does not explicitly disclose a flash memory for storing reference biological information of said user. Ritter discloses storing the biometric keys (biological information on a SIM-card, which is inserted into a communication device (col. 1, lines 46-49). Page 10, first paragraph of the specification recites, "This portable communication device is identical with conventional ones in having an antenna 601, a transmission and reception circuit 602, a signal processing circuit 603 to compress, expand and encode signals, a microcomputer 604 for control, a flash memory 605, a keyboard 606, a voice input circuit 607, voice output circuit 608, a microphone 609, a speaker 610 and, in addition, this device further has a sensor- incorporated display 611, a checking circuit part 612, etc." However, Wang further discloses the storage of identification data in flash memory (col. 9, lines 50-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the communication device taught by Ritter to alternatively store the reference biological information in flash memory instead of a SIM-card. One would have been motivated to use flash memory because it is suitable for long time saving, with no power required for storage, and can be expanded (via replacement or additional cards) to store larger amounts of data.

Regarding claims 7 and 57, Ritter discloses a system for identifying an individual and a portable information device (col. 4, lines 16-27), comprising: a display device (column 4, line 25-32); means for checking read biological information with reference biological information (column 4, line 32-52); and means for transmitting information about the matching to a

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destination of communication (col. 5, lines 9-48) only when the read biological information has matched the reference biological information (col. 4, lines 40-48, Ritter teaches if the biometrics are not authenticated, usage may be prevented such as turning the phone off.); and a means for notifying said user (provide client and operator with instructions via user interface) that communication between said user and said destination of communication has been authorized after said destination of communication receives the information (column 4, line 32-52; column 5, line 9-33).

The Examiner notes that Ritter does not explicitly disclose notifying the user that communication has been authorized, but it is obvious if not inherent that the user is informed of the authentication decision. It would have been obvious to one of ordinary skill in the art at the time the invention was made to notify said user, after said destination of communication receives the information, that communication between said user and said destination of communication has been authorized in order to inform the user whether or not communication has been authorized so that the user may take appropriate action.

Ritter does not disclose the display device having pixels, each of which includes a light emitting element and a sensor for reading biological information of a user or the light-emitting element comprises a cathode, a light emitting layer and an anode. Ritter does not explicitly disclose judging legitimacy of the user by checking read biological information with the reference biological information; or transmitting information about the judgment to a destination of communication. Ritter also does not disclose a flash memory for storing reference biological information of said user. Arguments analogous to those presented above for claims 1 and 51 are applicable to claims 7 and 57.

Regarding claims 35 and 85, Ritter discloses a system for identifying an individual and a portable information device (col. 4, lines 16-27), comprising: a display device (column 4, line 25-32); means for checking read biological information with reference biological information (column 4, line 32-52); and means for transmitting information about the matching to a destination of communication through the Internet (col. 5, lines 9-48; col. 6, lines 1-15) only when the read biological information has matched the reference biological information (col. 4, lines 40-48, Ritter teaches if the biometrics are not authenticated, usage may be prevented such as turning the phone off.); and a means for notifying said user (provide client and operator with instructions via user interface) that communication between said user and said destination of communication has been authorized after said destination of communication receives the information (column 4, line 32-52; column 5, line 9-33).

Ritter does not disclose the display device having pixels, each of which includes a light emitting element and a sensor for reading biological information of a user (means for reading biological information of a user by means of said sensor-incorporated display) or the light emitting element comprises a cathode, a light emitting layer and an anode. Ritter does not explicitly disclose judging legitimacy of the user by checking read biological information with the reference biological information; or transmitting information about the judgment to a destination of communication. Ritter also does not disclose a flash memory for storing reference biological information of said user. Arguments analogous to those presented above for claims 1 and 51 are applicable to claim 35 and 85.

Regarding claims 43 and 93, Ritter discloses a system for identifying an individual and a portable information device (col. 4, lines 16-27), comprising: a display device (column 4, line 25-32); means for checking read biological information with reference biological information (column 4, line 32-52); and means for transmitting information about the matching to a destination of communication through the Internet (col. 5, lines 9-48; col. 6, lines 1-15) only when the read biological information has matched the reference biological information (col. 4, lines 40-48, Ritter teaches if the biometrics are not authenticated, usage may be prevented such as turning the phone off.); and a means for notifying said user (provide client and operator with instructions via user interface) that communication between said user and said destination of communication has been authorized after said destination of communication receives the information (column 4, line 32-52; column 5, line 9-33; see above discussion of claims 7 and 57).

Ritter does not disclose the display device having pixels, each of which includes a light emitting element and a sensor for reading biological information of a user or the light-emitting element comprises a cathode, a light emitting layer and an anode. Ritter does not explicitly disclose judging legitimacy of the user by checking read biological information with the reference biological information; or transmitting information about the judgment to a destination of communication. Ritter also does not disclose a flash memory for storing reference biological information of said user. Arguments analogous to those presented above for claims 1 and 51 are applicable to claim 43 and 93.

Regarding claims 2, 8, 52 and 58, Ritter discloses that said biological information of said user is a palm pattern or a fingerprint (column 2, line 52-61).

Regarding claims 3, 9, 53 and 59, neither Ritter nor Harkin explicitly disclose that said biological information of said user is a pattern of a part of the palm of the user. The examiner takes Official Notice that palm imaging is well known in the art of biometrics. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a pattern of a part of the palm as said biological information in order to identify the user based on the pattern of the palm.

Regarding claims 6, 12, 38, 46, 56, 62, 88 and 96, Harkin discloses the sensor comprises a contact type area sensor (column 5, line 54-column 6, line 23, line 58-column 7, line 10).

Claims 109-116 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ritter, Harkin and Wang as applied to claims 1, 7, 35, 43, 51, 57, 85 and 93 above, and further in view of US 6,040,810 to Nishimura (newly cited).

Regarding claims 109-116, Ritter, Harkin and Wang do not disclose the sensor for reading biological information is a photodiode. Ritter teaches a video sensor (col. 4, lines 19) for obtaining the body features. Harkin teaches other optical sensors being incorporated into the device but does not explicitly disclose the sensor for reading the biological information is a photodiode (col. 8, lines 45-61). The sensor for reading biological information taught by Harkin is a capacitive contact type sensor. However, Nishimura teaches a display device having pixels,

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each of which includes a light emitting element and a sensor that is a photodiode (Fig. 1; col. 4, lines 23-31; col. 5, lines 55-65; col. 9, lines 23-29).

The teachings of Ritter, Harkin, Wang and Nishimura are combinable because they are all concerned with portable devices with incorporated sensors. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the device taught by the combination of Ritter, Harkin and Wang could be modified to include a sensor comprising a photodiode as taught by Nishimura because the display device taught by Nishimura makes it possible to perform imaging in the same region as the displaying (Nishimura, col. 5, lines 55-65) without deteriorating display quality (col. 2, lines 13-18).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,627,364 to Codama et al. teaches an array image sensor with a light emission element in an electroluminescent display.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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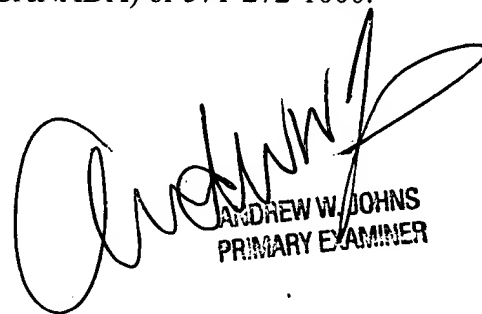
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Mackowey whose telephone number is (571) 272-7425. The examiner can normally be reached on M-F 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bella Matthew can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AM
5/23/07



ANDREW W. JOHNS
PRIMARY EXAMINER